Nortel WLAN - Security Switch 2300 Series Quick Start Guide

Nortel WLAN—Security Switch 2300 Series

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This is to certify that the Nortel WLAN Security Switch 2300 series switches are evaluated to the international regulatory standards for electromagnetic compliance (EMC) and safety and was found to have met the requirements for the following international standards:

- EMC - Electromagnetic Emissions – CISPR 22, Class A
- EMC - Electromagnetic Immunity – CISPR 24
- Electrical Safety – IEC 60950, with CB member national deviations
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ICES statement (Canada only)

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This digital apparatus (WLAN Security Switch 2300 series switches) does not exceed the Class A limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (WLAN Sécurité Changement 2300 changements de la série) respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

CE marking statement (Europe only)

EN 55022 statements

This is to certify that the Nortel WLAN Security Switch 2300 Series switches are shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC. Conformity is declared by the application of EN 55022 Class A (CISPR 22).

- **Warning:** This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take appropriate measures.
- **Achtung:** Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten, in welchen Fällen der Benutzer für entsprechende Gegenmaßnahmen verantwortlich ist.

- **Attention:** Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures spécifiques appropriées.

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European Union and European Free Trade Association (EFTA) notice

CE

All products labeled with the CE marking comply with the Electromagnetic Compliance (EMC) Directive (89/336/EEC) and the Low Voltage Directive (73/336/EEC) issued by the Commission of the European Community.

Compliance with these directives implies comformity to the following European Norms (ENs). The equivalent international standards are listed in parenthesis.

- EN 55022 (CISPR 22)–Electromagnetic Interference
- EN 55024 (IEC 61000-4-2, -3, -4, -5, -6, -8, -11)–Electromagnetic Immunity
- EN 61000-3-2 (IEC 610000-3-2)–Power Line Harmonics
- EN 61000-3-3 (IEC 610000-3-3)–Power Line Flicker

VCCI statement (Japan/Nippon only)

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This device has been approved for use in Business applications only per the Class A requirements of the Republic of Korea Ministry of Information and Communications (MIC). This device may not be sold for use in a non-business application.

Observe the Regulatory Marking label on the back or bottom of each switch for specific certification information pertaining to this model. Each model in the WLAN Security Switch 2300 Series is approved for shipment to/usage in Korea and is labeled as such, with all appropriate text and the appropriate MIC reference number.

National Safety Statements of Compliance

EN 60950 statement

This is to certify that the Nortel WLAN Security Switch 2300 Series switches are in compliance with the requirements of EN 60950 in accordance with the Low Voltage Directive. Additional national differences for all European Union countries have been evaluated for compliance.

NOM statement (Mexico only)

The following information is provided on the devices described in this document in compliance with the safety requirements of the Norma Oficial Méxicana (NOM):

Exporter:	Nortel Networks 4655 Great America Parkway Santa Clara CA 95054 USA
Importer:	Nortel Networks de México, S.A. de C.V. Avenida Insurgentes Sur #1605 Piso 30, Oficina Col. San Jose Insurgentes Deleg-Benito Juarez México D.F. 03900
Tel:	52 5 480 2100
Fax:	52 5 480 2199
Input	Model 2350 (with external power supply) 48V dc, 830mA, 40W External Power Supply AC Input 100-240V ac, 50-60Hz, 1.0A
Input	Model 2360 (single power supply) 100-240V ac, 50-60Hz, 2.0A Model 2361 (with redundant supply) 100-240V ac, 50-60Hz, 2.0A
Input	Model 2380 (single power supply) 100-240V ac, 50-60Hz, 8.0/3.5A Model 2380 (with redundant supply) 100-240V ac, 50-60Hz, 8.0/3.5A
Input	Model 2382 (with redundant supply) 100-240V ac, 50-60Hz, 1.0/0.5A

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La información siguiente se proporciona en el dispositivo o en los dispositivos descritos en este documento, en cumplimiento con los requisitos de la Norma Oficial Méxicana (NOM):

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Tel:	52 5 480 2100
Fax:	52 5 480 2199

Entrada	Modele 2350 (con suministro de corriente externo) 48V CC, 830mA, 40W AC el suministro de Power externo 100-240V CA, 50-60Hz, 1,0A
Entrada	Modele 2360 (solo suministro de corriente) 100-240V CA, 50-60Hz, 2,0A Modele 2361 (con suministro redundante) 100-240V CA, 50-60Hz, 2,0A
Entrada	Modele 2380 (solo suministro de corriente) 100-240V CA, 50-60Hz, 8,0/3,5A Modele 2380 (con suministro redundante) 100-240V CA, 50-60Hz, 8,0/3,5A
Entrada	Modele 2382 (con suministro redundante) 100-240V CA, 50-60Hz, 1,0/0,5A

Denan Statement (Japan/Nippon only)

警告

本製品を安全にご使用頂くため、以下のことにご注意ください。

- 接続ケーブル、電源コード、ACアダプタなどの部品は、必ず製品に同梱されております添付品または指定品をご使用ください。添付品・指定品以外の部品をご使用になると故障や動作不良、火災の原因となることがあります。
- 同梱されております付属の電源コードを他の機器には使用しないでください。上記注意事項を守らないと、死亡や大怪我など人身事故の原因となることがあります。

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Introduction

This Quickstart Guide provides basic instructions on how to install the hardware and perform basic configuration of a Nortel WLAN Security Switch (WSS).

Audience

The Quickstart Guide is intended for experienced installers.

How to get help

This section explains how to get help for Nortel products and services.

Finding the latest updates on the Nortel web site

The content of this documentation was current at the time the product was released. To check for updates or receive technical support for Nortel products, check the Nortel Technical Support web site:

http://www.nortel.com/support

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. From this site, you can:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the phone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support web site, and you have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following web site to obtain the phone number for your region:

http://www.nortel.com/callus

Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

http://www.nortel.com/erc

Getting help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

Precautions

WARNING

Installation must be performed by qualified service personnel only. Read and follow all warning notices and instructions marked on the product or included in the documentation. Before installing the product, read Translated caution statements, warning conventions and warning messages (page 36).

Protecting cables and connectors

- Support cables in order to prevent any stress on the connectors. If you have a high cable density configuration, you need to install additional cable management equipment.
- Do not exceed the bend radius recommended for the type of cable installed.
- Fiber optic cables and connectors require special care.
- Protect connectors with rubber safety plugs when cables are not inserted.
- When installing or replacing cables, follow appropriate fiber-cleaning procedures.
- Do not exceed the bend radius recommended for fiber optic cable. The acceptable bend radius for fiber optic cable is ten times its diameter, or between 2.5 and 5 cm (1 to 2 in.). Anything less than the recommendation can cause a loss of integrity of data transmission. Loss of integrity because of incorrect bend radius is difficult to diagnose.

Preventing electrostatic discharge damage

Electrostatic discharge (ESD) is a discharge of stored static electricity that can damage equipment and impair electrical circuitry. These electrostatic voltages can result from friction, including, but not exclusive to, pulling cabling through conduits, walking across carpeted areas, and building up of static charge in clothing. ESD damage occurs when electronic components are improperly handled and can result in complete or intermittent failures.

While networking equipment is commonly designed and tested to withstand common mode ESD events, voltage sometimes can be discharged to some connector pins but not others, or to some pins before others, which has the potential to damage the networking equipment.

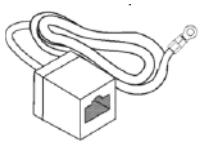
To protect Nortel equipment against ESD damage, take the following preventive measures before connecting any data cables to the device:

- Always use anti-static wrist straps. Make sure the strap is adjusted to provide good skin contact.
- Ensure that work surfaces and equipment racks are properly grounded for protection against electrostatic discharge. The common point must be connected to the building ground wire. In a properly wired building, the nearest reliable ground is typically at the electrical outlet.
- Avoid contact between equipment and clothing. The wrist or ankle strap only protects the equipment from ESD voltages on the body; ESD voltages on clothing can still cause damage.
- Avoid touching any connector pins.
- Do not remove the wrist or ankle strap until the installation is complete.

Preventing electrostatic damage in new cable installations

With new cable installations, Nortel recommends to use ESD discharge cable to reduce the potential for damage from static that can build up in cables. An example of such a cable is illustrated below.

Figure 1: ESD Cable example



Step - Action

1 Connect the ground lug on the ESD discharge cable to a safe and suitable earth ground.

2 Briefly connect all RJ-45 cable connectors to the female RJ-45 connector of the ESD discharge cable, and then connect each RJ-45 cable connector to the switch.

3 Leave cables connected to the networking equipment. Once cables are connected to networking equipment, the cables do not build up charge.

Before you begin

Before installing and configuring the WSS, the following basic planning steps must be completed.

Planning a WLAN installation

The WLAN Management Software (WMS) can only be installed on a single computer. You must decide which computer will be used to manage the WSS, and ensure that computer is accessible during the installation and configuration process.

The WMS installation CD is distributed with a license certificate to specify the serial number and Nortel Support email address. An email request must be sent to Nortel Support to receive the WMS license activation key as follows:

- WMS serial number — This serial number is listed on the license certificate included with the WMS CD.
- computer name — The computer name where WMS will be installed.
- company name — The name of your company.

A license activation key is required to use WMS, and must be available before you begin to configure the WSS.

When planning to install a wireless Access Point (AP), be sure to record the model and serial number printed on the back of the AP. This information is required when configuring WSS ports and Access Points (AP) using WMS. If the AP is already physically installed in a difficult to access location, the model and serial numbers are also printed on the box used to deliver the AP.

Some additional basic network information is also required before WMS configuration takes place, as described in "Gathering required information" on page 14.

Gathering required information

Before installing or configuring the WSS, print a copy of this page and ensure that all value fields in Table 1 have been filled in correctly. Keep this information close by during the configuration process.

Table 1: Required information

Information	Description	Values
Computer name	Each WMS license is limited to a single computer.	
WMS serial number	The WMS serial number and instructions for obtaining a license key are included on a sheet of paper inside the WSS box.	
WMS license key	The WMS license activation key must be received from Nortel.	
IP subnet address	The IP subnet address of the WLAN 2300 System.	
DNS server IP address	The IP address of the DNS server.	
Domain name	The domain name where the WLAN 2300 System is located.	
AP model number	The AP model that is being used in your WLAN 2300 System.	
AP serial number	Each AP has a unique serial number on the bottom of the AP. This serial number is required when configuring the WSS.	

Quick Start — Physical Installation

This section describes how to physically install a WSS. For more information about physical installation, see *Nortel WLAN—Security Switch 2300 Series Installation and Basic Configuration Guide*.

Installing the Nortel WLAN Security Switch

Estimated timing: 10 minutes

A WSS can be installed on either a tabletop surface or in an equipment rack. Table 2 outlines which installation methods are available for each WSS model.

Table 2: Installation methods

WSS model	Tabletop	Front-mount rack	Center-mount rack
2350	X		
2360/2361	X	X	
2380	X	X	X
2382	X	X	X

When choosing a location for the WSS, ensure that:

- The power outlet is within 1.82 m (6 ft) of the device.
- There is proper heat dissipation from and adequate ventilation around the switch.

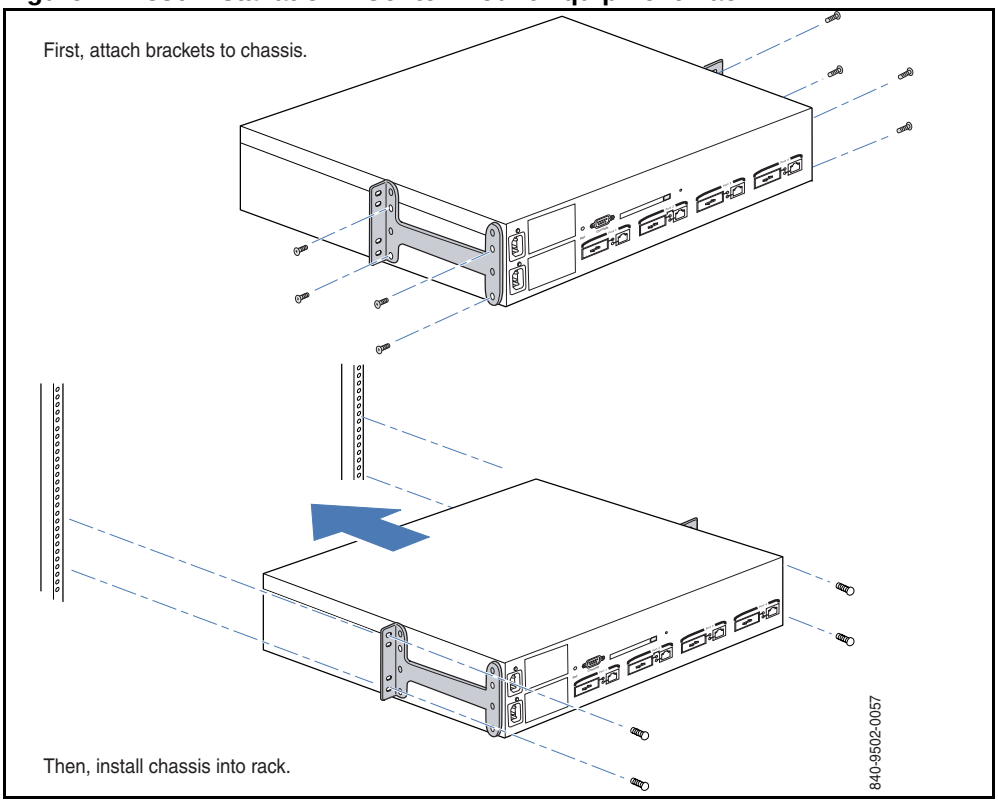
Tabletop Installation

Step	Action
1	Ensure that the table surface supports at least 3 kg (6.6 lb).
2	Carefully turn the WSS upside down on a clean work surface with no debris.
3	Wipe the four placement locations for the rubber feet to clear away any oil or dust. Each location area is marked with an ‘X’.
4	Attach the four rubber adhesive feet over the ‘X’s.
5	Turn the WSS right-side up, and place the switch in position on the table.
	End

Equipment Rack Installation

Step	Action
1	Remove the four bracket screws from each side of the WSS.
2	Align a bracket over the screw holes: • For a front-mount equipment rack, align the bracket so that the bracket flange is flush with the WSS front panel and away from the switch. • For a center-mount equipment rack, align the bracket so that the bracket flange is located near the center screw holes, as shown in Figure 2.

Figure 2: 2380 Installation—Center-Mount Equipment Rack



3 Reinsert the screws to secure the brackets to the WSS.

4 Repeat for the other bracket.

CAUTION

Nortel recommends that you ask someone to assist you with the remaining steps. If you accidentally drop the WSS, you can be injured and the switch can be damaged.

5 Lift the WSS into position in the equipment rack.

6 Insert the bottom rack-mount screws into the bracket flanges to secure the WSS to the equipment rack, then insert the top screws.

End

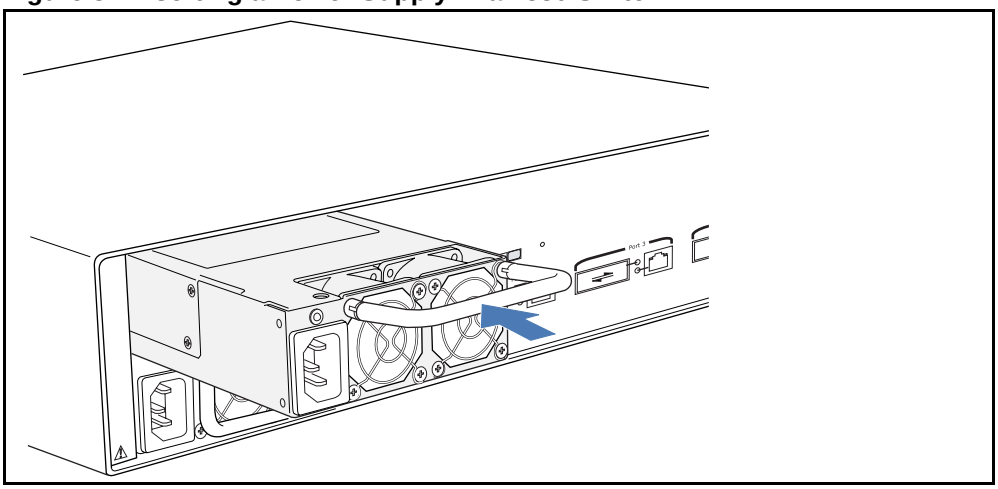
Installing a new power supply

Estimated timing: 5 minutes

Some WSS models support secondary power supplies. To install a secondary power supply, complete the following steps:

Step	Action
1	Loosen the thumbscrew in an unused slot with a #2 Phillips-head screwdriver, and remove the cover plate.
2	Remove the new power supply from its packaging and lift the supply by grasping the front handle with one hand and supporting the supply from the bottom with the other hand.
3	Insert the power supply into the slot as shown in Figure 3, pushing gently but firmly until the supply is fully seated and flush with the switch's front panel.

Figure 3: Inserting a Power Supply in a 2380 Switch



4	Tighten the thumbscrew using a #2 Phillips-head screwdriver.

End

Powering on the Nortel WLAN Security Switch

Estimated timing: 5 minutes

Powering on a 2350

Step	Action
1	Plug the external power supply input AC cord into an AC power source.
2	Attach the external power supply DC output cable to the Power port on the 2350. The 2350 begins booting as soon as you plug in the power cord.
3	Ensure that the external power supply LED and the 2350 power LED turn green to verify that the external power supply is operating normally.

End

Powering on a 2360/2361

Step	ActionStep
1	Attach the approved AC power cord to each Power port on the 2360 or 2361 (2 power ports).
2	Plug the power cord (s) into the AC power source (s). The 2360 or 2361 begins booting as soon as you plug in the power cord(s).
3	On the 2360 ensure that the power supply LED turns green to verify that the power supply is operating normally. On the 2361 observe each power supply. LED to verify that both power supplies are operating normally.

Powering on a 2380

Step	Action
1	Ensure that any removable power supply is fully seated in the 2380.
2	For each power supply that you are using on the 2380, attach a power cord.
3	Plug each power cord into an AC power source. The 2380 begins booting as soon as you plug in the power cord(s).
4	On each 2380 power supply ensure that the power LED turns green to verify that the power supply is operating normally. For the 2380 switch, wait a few seconds to verify that the Mgmt LED is functioning (repeatedly flashing bright green, then fading).

End

Powering on a 2382

Note: The WSS 2382 runs only on Version 6.0 software and later releases. Software Versions prior to 6.0 will not run on this hardware.

Step	Action
1	Ensure that any removable power supply is fully seated in the 2382.
2	For each power supply that you are using on the 2382, attach a power cord.
3	Plug each power cord into an AC power source. The 2382 begins booting as soon as you plug in the power cord(s).
4	On each 2382 power supply ensure that the power LED turns green to verify that the power supply is operating normally. For the 2382 switch, wait a few seconds to verify that the Mgmt LED is functioning (repeatedly flashing bright green, then fading).

End

Connecting to a Serial Management Console

Estimated timing: 5 minutes

Step	Action
1	Insert the serial cable into the PC port.
2	Insert the other end of the cable into the serial console port on the WSS.
3	Start a standard VT100 terminal emulation application on the PC, and configure the modem settings listed in Table 3.

Table 3: Communication protocol settings

Setting	Value
Baud rate	9600 bps
Data bits	8 bits
Stop bits	1 stop
Parity	No parity
Flow Control	off or disabled

Step	Action
4	Open a terminal connection on a serial port. If the WSS is already powered on, then the terminal connection will request a password. Leave the password field blank, because the default password is not set.
5	Press **Enter** until the command prompt appears.

End

Connecting to the network

Estimated timing: 5 minutes

Connecting Access Points

Use the following procedure to connect a AP to the WSS or to another PoE-capable 10/100 ethernet device. For information about the physical installation of APs, see *Nortel WLAN—Access Point 2330A/2330B Quick Installation Guide* or *Nortel WLAN—Series 2332 Access Point Quick Installation Guide*.

Step	Action
1	Connect an ethernet cable to the AP.
2	Connect the other end of the ethernet cable to the WSS port, or to the ethernet device. • If connecting the AP to the WSS, the AP will not receive power until PoE is enabled for that port.

- If connecting the AP to an ethernet device other than the WSS, observe the appearance of the AP LED for the port.

Table 4 describes the AP LED appearance and associated meaning.

Table 4: AP LED indicator status

AP LED Appearance	Meaning
Solid green	For an AP active link, with PoE enabled, the following are true: • AP has booted. AP has received a valid configuration from the WSS. • Management link with an AP is operational. • For an AP's secondary link, the link is present.
Alternating green and amber	AP is booting with an image received from the WSS.
Solid amber	PoE is enabled, but the AP is not connected to the network.
Blinking amber	AP is unresponsive or there is a PoE problem.
Unlit	PoE is disabled.

End

Connecting other ethernet network devices

Use the following procedure to connect a WSS to other 10/100 Ethernet devices, or a gigabit Ethernet device.

Step	Action
1	Insert a Cat-5 cable with a standard RJ-45 connector. • Use a straight-through cable to connect to a router, Access Point (AP), or an end station such as a PC, printer, or server. • Use a crossover cable to connect to another switch.

Note: The 10/100 Ethernet ports on 2360/2361 switches provide automatic MDI/MDX.

2	If the cable is attached to a wired end station that uses AAA through the WSS to access the network, set the port type for a wired authentication port to activate the link.

3 Observe the appearance of the Link LED for the port to determine link status.

Table 5 describes the LED appearance, and what each appearance means. If the Link LED is unlit, check the cable connection and verify that the device at the other end of the link is operating.

Table 5: Link LED indicator status

Link LED Appearance	Meaning
Solid green	100-Mbps link is operational.
Solid amber	10-Mbps link is operational.
Blinking green	Traffic is active on the 100-Mbps link.
Blinking amber	Traffic is active on the 10-Mbps link.
Unlit	Link is not operational. Verify that the device at the other end of the link is operating.

End

Connecting to fiber gigabit devices (WSS 2380 and WSS 2382 only)

You must install a gigabit interface converter (GBIC) to connect the WSS 2380/2382 using 1000BASE-SX or 1000BASE-LX fiber cables. Complete the following procedure to install a GBIC and connect the fiber cable.

Step	Action
1	Insert the GBIC into a GBIC slot on the front panel until it clicks into place.
2	Remove the protective covering(s) from the port connector(s) and set them aside in a safe place for later use.
3	Insert the network cable.

Note: For 1000BASE-SX or 1000BASE-LX fiber, make sure you insert the two cable ends in the proper sides (transmit or receive). Otherwise, the link does not work.

4 Observe the upper LED to the right of the GBIC port:

- If the LED is green, the 1000-Mbps link is operational.
- If the LED is blinking amber, traffic is active on the 1000-Mbps link.
- If the LED is unlit, the link is not operational. Check the cable and verify that the device at the other end of the link is operational.

End

Connecting to copper gigabit devices (WSS 2380 and WSS 2382 only)

Complete the following procedure to install a GBIC.

Step	Action
1	Insert a Cat-5 cable with a standard RJ-45 connector into the port's copper interface. The Cat-5 cable can use straight-through or crossover signaling.
2	Access the WSS CLI using the serial console port, as described in "Powering on a 2380" on page 18.
3	Enter **enable** to access the configuration level of the CLI. The password to gain access to privileged mode is not set. When prompted for the password, press **Enter** to continue.
4	Enter **set port media-type <*port-list*> rj45** to set the active interface on the port to RJ-45 (copper).
5	Observe the lower LED to the left of the port: • If the LED is solid green, the 1000-Mbps link is operational. • If the LED is blinking green, traffic is active on the 1000-Mbps link. • If the LED is unlit, the link is not operational. Check the cable and verify that the device at the other end of the link is operational.
	End

Quick Start — Basic Configuration

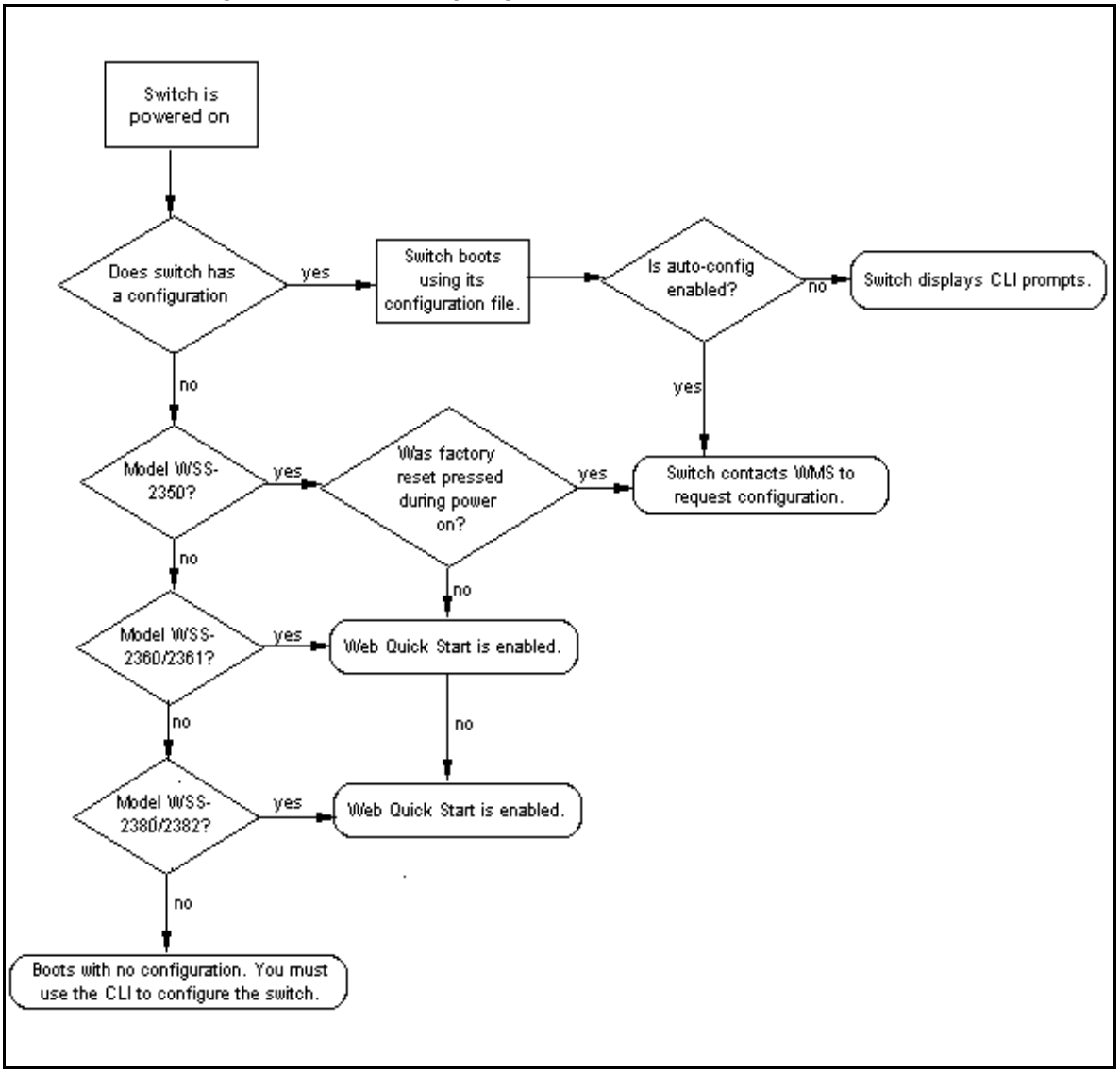
This section describes how to configure the WSS. For additional information about configuring your WSS, see the following documents:

- *Nortel WLAN—Security Switch 2300 Series Installation and Basic Configuration Guide*
- *Nortel WLAN Security Switch 2300 Series Configuration Guide*.

WSS startup algorithm

Figure 4 shows how the WSS Startup Algorithm process is followed when a WSS is powered on.

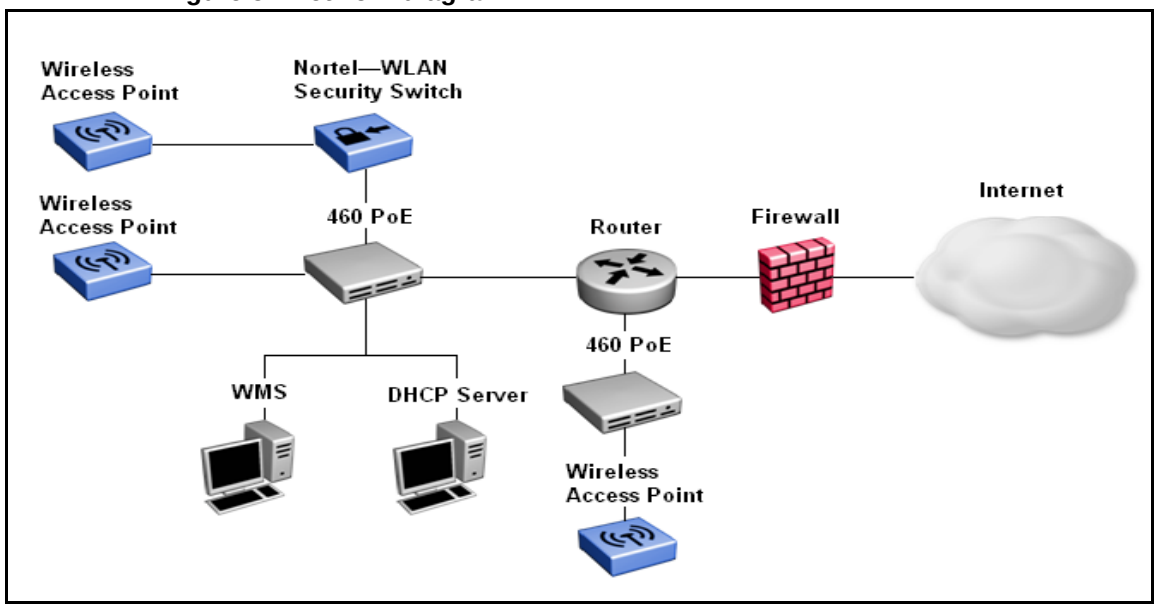
Figure 4: WSS Startup Algorithm



WSS sample network configuration

Figure 5 shows a sample network configuration using a WSS and two APs.

Figure 5: Network diagram



Configuring the Nortel WLAN Security Switch

The steps involved in configuring the solution shown in the diagram can be broken down into the following tasks:

Table 6: Configuration tasks

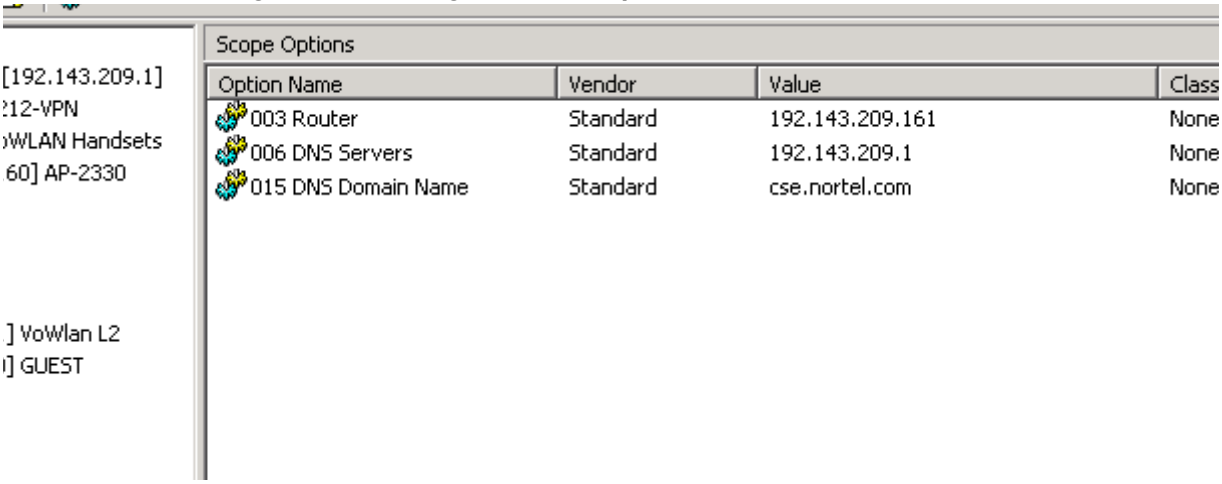
Task	Page
Creating a scope on the DHCP server	page 25
Accessing the WSS CLI quickstart wizard	page 26
Installing and using WMS	page 28
Configuring WSS using WMS	page 31
Test the solution	page 35
Where to go next	page 35

Creating a scope on the DHCP server

Estimated timing: 10 minutes

If required, create a scope on the DHCP server that will lease addresses to the AP and the mobiles, as shown in Figure 6.

Figure 6: Creating a DHCP scope



No special scope options need to be configured when the WSS is deployed in layer 2 environments, as the AP will find the WSS automatically using broadcast.

Configuring DHCP for APs

The DHCP option 43 field provides a simple and effective way for APs to find WSSs across an intermediate Layer 3 network. You can use the DHCP option 43 field to provide a list of WSS IP addresses without the need to configure DNS servers.

To use DHCP option 43, configure the option to contain a comma-separated list of WSS IP addresses or hostnames, in the following format:

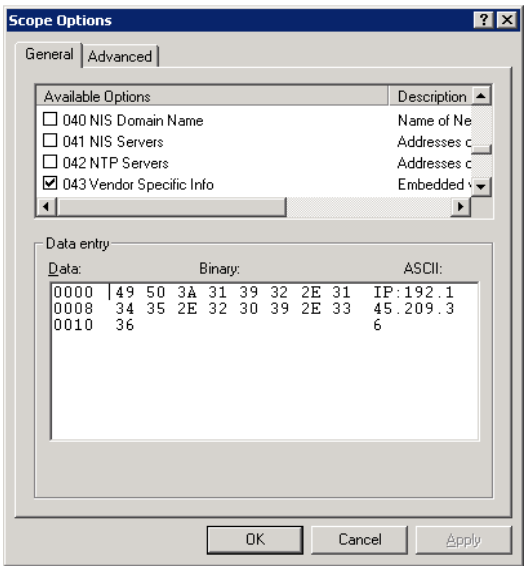
ip:*ip-addr1*,*ip-addr2*,**...**

or

host:*hostname1*,*hostname2*,**...**

Figure 7 shows an example of adding option 43 to a DHCP configuration.

Figure 7: Adding option 43 to the DHCP scope



You can use an IP address list or a hostname list, but not both. If the list contains both types of values, the AP does not attempt to use the list.

Note: Be sure to removed the default leading period before entering an ASCII IP address. The DHCP configuration will not work correctly if this period remains in front of the IP address.

If you use the host option, you must configure the network's DNS server with address records that map the hostnames in the list to the WSS IP addresses. Valid characters in hostnames are limited to uppercase and lowercase letters, numbers, periods (.), and hyphens (–).

After receiving a DHCP, acknowledgement containing a valid string for option 43, a AP sends a unicast message to the each WSS in the list, to request a software image and configuration. If the AP does not receive a reply to the request after one minute, the AP starts the boot process over with a new DHCP Discover message, this time from AP port 2.

No configuration is required on the WSS itself.

Accessing the WSS CLI quickstart wizard

Estimated timing: 10 minutes

Note: The quickstart wizard places the Ethernet port in VLAN 1. If your requires that the Ethernet port be in a different VLAN or tagged, then you must manually configure and save those settings using the CLI.

To access the CLI quickstart wizard, use the following procedure:

Step	Action
1	Attach a PC to the WSS serial console port, as described in "Powering on a 2382" on page 18.
2	Enter **enable** to access the configuration level of the CLI. The password to gain access to privileged mode is not set. When prompted for the password, press **Enter** to continue.

3 Enter **quickstart** to access the quickstart wizard.

The quickstart wizard asks a series of questions, as shown in Figure 8 on page 27. You can enter **?** at any time for more help, or press Ctrl+C to quit.

Note: When the script asks: “Do you wish to configure wireless?”, enter **n** to skip this process. Wireless configuration will be completed using WMS.

4 Enter **save config** to save the updated configuration file.

5 Reboot the WSS.

After the switch powers up again, the quickstart configuration changes take effect immediately.

End

Figure 8: Quickstart configuration example

```
2360# quickstart
This will erase any existing config. Continue? [n]: y
Answer the following questions. Enter '?' for help. ^C to
break out

System Name [2360]:
Country Code [US]: CA
System IP address []: 192.168.248.201
System IP address netmask []: 255.255.255.0
Default route []: 192.168.248.1
Admin username [admin]:
Admin password []: adminpwd
Do you wish to set the time? [y]:
Enter the date (dd/mm/yy) []: 05/04/06
Enter the time (hh:mm:ss) []: 11:38:00
Enter the timezone []: AST
Enter the offset from GMT for 'AST' in hh:mm [0:0]: 4:00
Do you wish to configure wireless? [y]: n

success: created keypair for ssh
success: created keypair for admin
success: created self-signed certificate for admin
success: remember to save this config

2360# save config
```

Installing and using WMS

Estimated timing: 15 minutes

WLAN Management Software (WMS) allows users to view and manage WSS configuration settings from a remote computer.

The installation files for WMS are available from two sources:

- The software CD included with the WSS.
- The Nortel web site (see "Finding the latest updates on the Nortel web site" on page 9)

Installing WMS

To install the WMS, complete the following steps:

Step	Action
1	Locate the WMS installation file. • If using the WMS version included with the WSS, the file is located on the CD. • If using a WMS version downloaded from the Nortel web site, the file location was specified during the download process.
2	Double-click on the install.exe file. The InstallAnywhere application opens, and the Introduction screen appears.
3	Click **Next**. The Choose Installation Type screen appears.
4	Select **WMS Services**. The WMS Services option installs both the WMS client and associated services on your machine.
5	Click **Next**. The license agreement screen appears.
6	Select **I accept the terms of the License Agreement**.
7	Click **Next**. The Choose Install Folder screen appears.
8	Confirm or change the location where the WMS software is installed. • To select a new folder, click Choose and browse for a local folder. • To reset the default value, click Restore Default Folder.
9	Click **Next**. The Pre-Installation Summary screen appears. If the information displayed is incorrect or needs to be modified before installing the software, click Previous until the appropriate screen appears to correct the information.
10	Click **Install** to begin the WMS installation process. Once the WMS software is installed on your machine, the Select System Ports screen appears.
11	Click **Next** to accept the default port values. The Memory Limits screen appears.
12	Click **Next** to accept the default values. A summary screen appears when the installation is complete.

13 Click **Done**.

End

Opening WMS

To open a new installation of WMS for the first time, complete the following steps:

Step	Action

1 Double-click the **WMS** icon on your desktop.

The License Information dialog appears, asking for the Serial Number and License key. See "Gathering required information" on page 14 for more information about these fields.

2 Specify the WMS serial number and license key.

3 Click **OK**.

WMS confirms the serial number and license key, and displays a dialog box to showing:

- the running software is a licensed copy
- which host(s) the license is valid for
- how many APs can be managed

4 Click **OK** to close the License Information dialog box.

The WMS Services Connection screen appears.

5 Specify values for the WMS Services Connection fields, as described in Table 7

Table 7: WMS Services Connection fields

Field	Description
Address	Specifies the IP address of the WMS server. Use the loopback IP address (127.0.0.1) if the client and server are installed on the same machine.
Port	Specifies the connection port used. Accept the default value.

6 Click **Next** to generate a certificate using the license key.

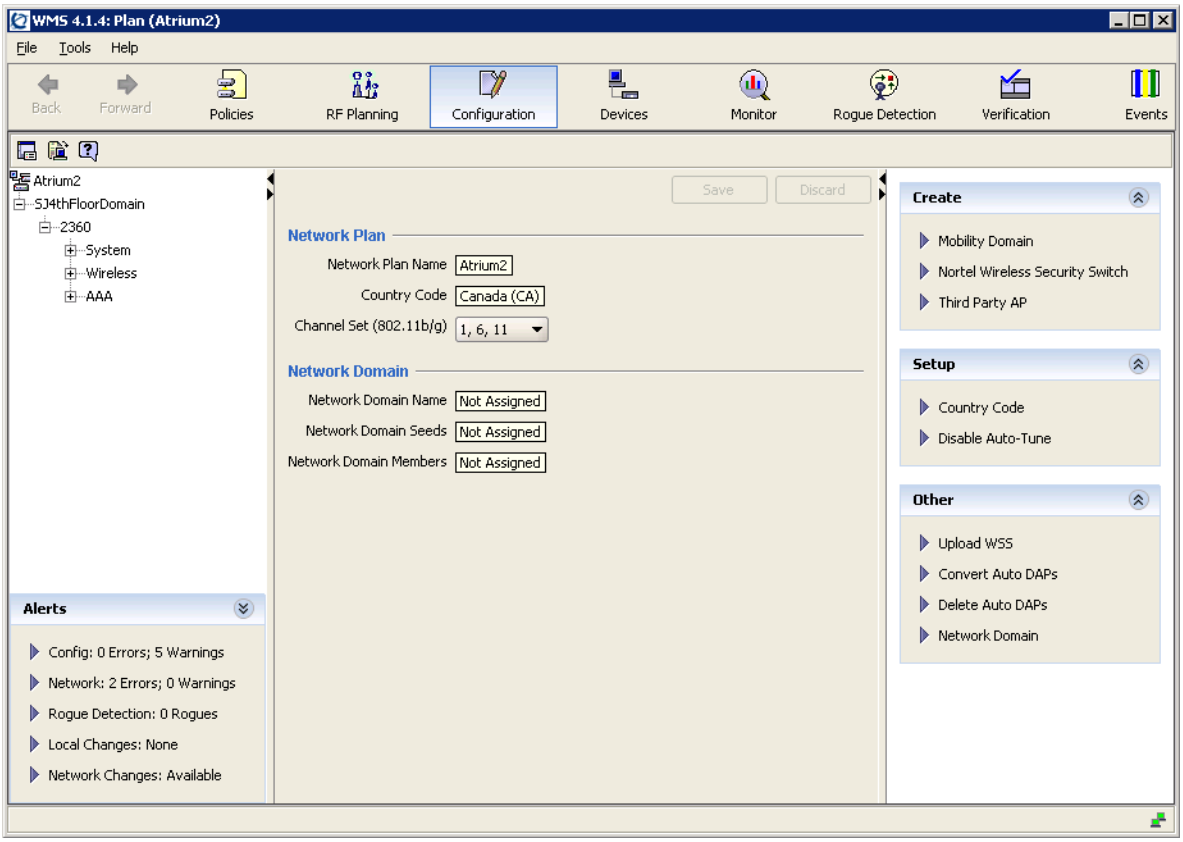
The Certificate Check screen appears, and displays the new certificate. Select **Always accept self-signed certificates** to skip this certificate check in the future.

7 Click **Accept** to open the WMS.

Figure 9 shows the WMS configuration screen.

End

Figure 9: WMS configuration screen



Configuring WMS users

Step	Action
1	Select **Tools > WMS Services Setup** from the menu. The WMS Services Setup dialog box appears.
2	Make the following changes: • Under **Access Control**, deselect the **Allow all users** option. You are automatically prompted to create the Administrator user. Specify and confirm a password, and click OK to continue. • Under **Authorized Users**, create additional users with different privileges as desired.
3	Click **Save**.
4	Click **Close** on the WMS Services Setup dialog box.
5	Select **File > Exit** from the menu to log out of WMS.

End

Configuring WSS using WMS

Estimated timing: 15 minutes

With WMS installed and configured, it is time to finish the required WSS configuration.

Creating a new network plan

Begin by creating a new network plan using the following steps:

Step	Action
1	Double-click the **WMS** icon on your desktop to open WMS. The WMS Services Connection dialog box appears, requesting a username and password.
2	Log into WMS as before, with the following exceptions: • Specify the username and password for the Administrator user. • Check to ensure that Open Network Plan is *not* selected.
3	Select **File > New Network Plan** from the menu. The Create Network Plan dialog box appears.
4	Specify a unique **Network Plan Name** and the correct **Country Code**.
5	Click **Next**. A progress window appears as the new network plan is created and saved. The new network plan is then displayed in WMS.

End

Uploading the WSS configuration

The WSS configuration that was completed using the quickstart wizard must be uploaded to the network plan using the following steps:

Step	Action
1	Select the Network Plan icon from the navigation tree.
2	Click **Other > Upload WSS** from the smart menu on the right side. The Upload Nortel Wireless Security Switch dialog box appears.
3	Specify the WSS IP address.

Note: The Enable password is not set. Leave this field blank when uploading the WSS configuration.

4	Click **Next**. If you did not choose to always accept self-signed certificates earlier, the Certificate Check dialog box will appear. Accept the certificate to continue. The Upload WSS Progress dialog box appears.

5 Click **Next**.

The Verification Progress dialog box appears.

Note: SNMP is not enabled by default, and the Enable password has not been set in the WSS. Ignore the errors these settings generate during the verification process for now.

6 Click **Finish**.

The WSS is now imported into WMS under the selected plan name. This finishes the initial configuration of WMS.

End

Creating a Service Profile

With the base setup in place, you are now ready to start provisioning. Complete the following steps to create a Service Profile for the wireless network:

Step	Action

1 Select ***WSS_model*** **> Wireless > Wireless Services** from the navigation tree.

2 Click **Create > Custom Service Profile** from the smart menu.

The Service Profile Identifier screen appears.

3 Specify values for the Service Profile Identifier fields, as described in Table 8.

Table 8: Service Profile Identifier fields

Field	Description
Name	Specifies a unique name for the Service Profile.
SSID	Specifies the SSID name.
SSID Type	Specifies whether or not the SSID is encrypted. Select Clear from the list.

4 Click **Next**.

The Access Types screen appears.

5 Select **Open Access** from the list of access types.

6 Click **Next**.

The Open Access VLAN screen appears.

7 Select **default** from the list of VLANs.

8 Click **Finish** to complete the Service Profile.

End

Add the last resort user

To add the last resort user to the local AAA user database, complete the following steps:

Step	Action
1	Select ***WSS_model*** **> AAA > Local User Database** from the navigation tree.
2	Click **Create > User** from the smart menu. The User Information screen appears.
3	Specify the user settings, as described in Table 9.

Table 9: User Information fields

Field	Description
Name	Specifies the username. To authenticate correctly, the username for a last resort user must be defined using the format: **last-resort-*<SSID>***.
Password	Specifies the user password. This password is only checked for users defined on an external RADIUS server.
User Group	Specifies the group that this user belongs to. Select **Not Assigned** from the list.
VLAN Name	Specifies the VLAN that this user or group belongs to. Select **default** from the list.

Step	Action
4	Click **Next**. The Optional: Authorization Attributes screen appears.
5	Click **Finish** to create the new user.

End

Adding and enabling Access Points

APs can connect to the WSS directly, or through a distributed network. To configure the connection between the WSS and an AP, complete the following steps:

Step	Action
1	Select ***WSS_model*** **> Wireless > Access Points** from the navigation tree.
2	Click the appropriate option from the smart menu: • **Create > Directly Connected AP** — Add an AP that is connected directly to a port on the WSS. • **Create > Distributed AP** — Add an AP that is not connected indirectly, using a distributed network.
3	Describe how the AP will be located on the network. • For a directly connected AP, the AP Port Selection screen appears. Select the WSS port for the AP from the list of available ports.

- For a distributed AP, the AP Identifier screen appears. Complete the AP Identifier fields, as described in Table 10.

Table 10: AP Identifier fields

Field	Description
Name	Specifies a unique name for the AP.
AP Number	Specifies the unique key for the AP.
Serial Number	Specifies the serial number of the AP. The serial number and fingerprint of an AP are printed on the bottom of the Access Point.
Fingerprint	Specifies the fingerprint of the AP. The serial number and fingerprint of an AP are printed on the bottom of the Access Point.

4 Click **Next**.

The AP Type screen appears.

5 Select the correct **AP Model** from the list, and specify the **AP Radio Type**.

6 Click **Next**.

Depending on the radio type selected previously, either the 802.11g Radio or the 802.11a Radio screen appears. Check to ensure the Enabled checkbox is selected before continuing.

7 Click **Next**.

The 802.11a Radio screen appears. Check to ensure the Enabled checkbox is selected before continuing.

8 Click **Finish**.

End

Deploying the configuration

The entire configuration done so far is kept locally on the WMS server. To complete the switch configuration, all local changes must be deployed to the WSS and saved.

Note: You cannot deploy Local Changes if Network Changes also exist. This occurs when network changes are made directly to the WSS using the local interface in the interim. Review any Network Changes before deciding if you want to Accept or Undo them, before deploying Local Changes.

Complete the following steps to deploy the configuration:

Step	Action
1	Select ***WSS_model*** from the navigation tree.

2 Click ***WSS_model* Changes > Deploy** from the smart menu.

The Deploy Configurations screen appears, and configuration changes are automatically applies to the WSS.

Note: To view the list of pending changes, select **Review** from the smart menu before deploying the configuration.

3 Click **Close**.

End

Test the solution

Estimated timing: 10 minutes

Use a wireless NIC card to see if you can obtain an IP address and reach the Internet.

Security Alert: This quickstart guide installs and enables the wireless network, but does not configure any security restrictions. Any user with wireless access can use the network. See "Where to go next" on page 35 to find documents that provide additional information for securing and configuring the WSS.

Where to go next

The basic WSS configuration is completed. Check *Nortel WLAN—Security Switch 2300 Series Installation and Basic Configuration Guide* and *Nortel WLAN Security Switch 2300 Series Configuration Guide*. for additional information and a complete listing of related Nortel WLAN Security Switch material.

Translated caution statements, warning conventions and warning messages

Not all of these warnings apply to every Nortel product. The warnings that apply to a specific product appear in the installation guide for that product. The installation guides containing these warnings are located on the documentation CD.

Caution statements

Caution! This device is a Class A product. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

Attention! Le périphérique est un produit de Classe A. Le fonctionnement de cet équipement dans une zone résidentielle risque de causer des interférences nuisibles, auquel cas l'utilisateur devra y remédier à ses propres frais.

Achtung! Dies ist ein Gerät der Klasse A. Bei Einsatz des Geräts in Wohngebieten kann es Störungen des Radio- und Fernsehempfangs verursachen. In diesem Fall muss der Benutzer alle notwendigen Maßnahmen ergreifen, die möglicherweise nötig sind, um die Störungen auf eigene Rechnung zu beheben.

Precaución! Este es un producto clase A. El uso de este equipo en áreas residenciales puede causar interferencias nocivas, en cuyo caso, se requerirá que los usuarios tomen cualquier medida necesaria para corregir la interferencia por cuenta propia.

Cuidado! Este dispositivo é um produto Classe A. Operar este equipamento em uma área residencial provavelmente causará interferência prejudicial; neste caso, espera-se que os usuários tomem as medidas necessárias para corrigir a interferência por sua própria conta.

Attenzione! Questo dispositivo è un prodotto di Classe A. Il funzionamento di questo apparecchio in aree residenziali potrebbe causare interferenze dannose, nel cui caso agli utenti verrà richiesto di adottare tutte le misure necessarie per porre rimedio alle interferenze a proprie spese.

Lithium Battery Caution

The Nortel Wireless Security Switches contain a lithium battery. If you need to replace the battery, make sure you dispose of the battery properly according to local regulations and replace the battery only with another comparable lithium battery.

Caution! Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Attention! Risque d'explosion si la batterie est remplacée par un type de batterie incorrect. Mettez les batteries usagées au rebut conformément aux instructions.

Achtung! Explosionsgefahr bei Ersetzen der Batterie durch falschen Typ. Entsorgung von gebrauchten Batterien gemäß Anleitung.

Precaución! Existe riesgo de explosión si se reemplaza la batería por un tipo incorrecto. Desházase de las baterías usadas siguiendo las instrucciones.

Cuidado! Risco de explosão caso a bateria seja substituída pelo tipo incorreto. Descarte as baterias usadas de acordo com as instruções.

Attenzione! Rischio di esplosioni se si sostituisce una batteria di tipo non corretto. Smaltire le batterie scariche attenendosi alle istruzioni.

Radio safety advisories for Access Points

Caution! The AP-2330/2330A/2330B and Series 2332 radios are disabled by default and can be enabled only by a system administrator using the WSS.

Attention! Les communications radios du AP-2330/2330A/2330B and Series 2332 sont désactivées par défaut et peuvent être activées uniquement par un administrateur système utilisant le WSS.

Achtung! Die AP-2330/2330A/2330B and Series 2332 Radios sind standardmäßig ausgeschaltet und können nur durch einen Systemadministrator unter Verwendung des WSS eingeschaltet werden

Precaución! Las radios AP-2330/2330A/2330B and Series 2332 se desactivan en forma predeterminada y pueden activarse sólo con un administrador de sistema utilizando el WSS.

Cuidado! Os rádios do AP-2330/2330A/2330B and Series 2332 estão desativados por padrão e só podem ser ativados por um administrador de sistema usando WSS.

Attenzione! Le radiazioni del dispositivo AP-2330/2330A/2330B and Series 2332 vengono disattivate per impostazione predefinita e possono essere attivate soltanto da un amministratore di sistema tramite WSS.

Warning conventions

Warning! This situation or condition can cause injury.

Avertissement! Cette situation ou condition peut entraîner un risque de blessure.

Warnung! Diese Situation oder dieser Umstand kann zu Verletzungen führen.

Advertencia! Esta situación o condición puede causar lesiones.

Aviso! Esta situação ou condição pode causar ferimentos.

Avviso! Situazione o condizione che può causare ferite.

Warning! High voltage. This situation or condition can cause injury due to electric shock.

Avertissement! Tension élevée. Cette situation ou condition peut entraîner un risque de blessure provoquée par un choc électrique.

Warnung! Hochspannung. Diese Situation oder dieser Umstand kann zu Verletzungen durch Stromschläge führen.

Advertencia! Alto voltaje. Esta situación o condición puede causar lesiones debido a electrocución.

Aviso! Alta tensão. Esta situação ou condição pode causar ferimentos devido a choque elétrico.

Avviso! Alta tensione. Questa situazione o condizione può causare ferite dovute a scosse elettriche.

Qualified service personnel warning

Warning! Only qualified service personnel must perform installation. Read and follow all warning notices and instructions marked on the product or included in the documentation.

Avertissement! L'installation doit être effectuée exclusivement par un personnel qualifié. Lisez et conformez-vous à tous les avis et instructions d'avertissement indiqués sur le produit ou dans la documentation.

Warnung! Nur qualifiziertes Wartungspersonal darf die Installation vornehmen. Lesen und befolgen Sie die Warnungshinweise und Anweisungen, die auf dem Produkt gekennzeichnet oder in der Dokumentation enthalten sind.

Advertencia! Sólo el personal de servicio calificado podrá realizar la instalación. Lea y siga todas las instrucciones y advertencias marcadas en el producto o incluidas en la documentación.

Aviso! Apenas profissionais de atendimento técnico qualificados devem realizar a instalação. Leia e siga todos os avisos e instruções destacados no produto ou que façam parte da documentação.

Avviso! L'installazione deve essere eseguita esclusivamente da personale qualificato. Leggere e seguire tutti gli avvisi e le istruzioni presenti sul prodotto o inclusi nella documentazione.

Laser warning

Warning! The gigabit Ethernet fiber-optic interfaces use Class 1 lasers. To reduce the risk of eye injury, do not stare into the interface or otherwise direct the laser beam into your eye.

8769EB

Avertissement! Les interfaces des fibres optiques Ethernet gigabit utilisent des produits laser de classe 1. Pour réduire le risque de blessure oculaire, ne regardez pas fixement l'interface ou ne dirigez pas le rayon laser dans votre œil.

Warnung! Die Gigabit-Ethernet-Glasfaseranschlüsse verwenden Laser der Klasse 1. Um das Risiko einer Augenverletzung zu reduzieren, schauen Sie nicht direkt in den Anschluss, und lenken Sie den Laserstrahl nicht anderweitig in das Auge.

Advertencia! Las interfaces de fibra óptica gigabit Ethernet utilizan láseres de Clase 1. Para reducir el riesgo de sufrir lesiones en los ojos, no mire directamente la interfaz ni dirija el haz de láser a su ojo.

Aviso! As interfaces de fibra ótica Ethernet em gigabits usam lasers de Classe 1. Para reduzir o risco de ferimentos nos olhos, não olhe diretamente para a interface ou direcione o feixe de laser para seus olhos.

Avviso! Le interfacce a fibra ottica Gigabit Ethernet utilizzano raggi laser di Classe 1. Per ridurre il rischio di danni agli occhi, non soffermare lo sguardo sull'interfaccia né?dirigere in alcun modo il raggio laser verso gli occhi.

Earth ground warning

Warning! Earth grounding is required for a WSS installed in a rack. If you are relying on the rack to provide ground, the rack itself must be grounded with a ground strap to the earth ground. Metal screws attaching the switch to the rack provide ground attachment to the rack.

Avertissement! La mise à la terre est requise pour l'installation du WSS dans un support. Si vous comptez sur le support pour relier l'appareil à la terre, le support doit lui-même être mis à la terre via un conducteur de terre. Le support peut être relié à la terre à l'aide de vis métalliques fixant le commutateur au support.

Warnung! Erdung ist erforderlich für ein WSS, das in einer Buchse installiert ist. Wenn Sie die Erdung durch die Buchse gewährleisten, muss die Buchse selbst mit einem Erdungsband an der Erde geerdet sein. Metallschrauben, mit denen der Schalter an der Buchse befestigt wird, bieten Bodenkontakt für die Buchse.

Advertencia! Se requiere conexión a tierra para un WSS instalado en un soporte. Si cuenta el soporte para que le brinde conexión a tierra, el soporte mismo puede conectarse a tierra con una correa de descarga a tierra. Los tornillos de metal que adhieren el interruptor al soporte le brindan conexión a tierra al soporte.

Aviso! É necessário o aterramento para um <inserir nome do produto> instalado em um bastidor. Se você depende do bastidor para o aterramento, o próprio bastidor deve ser aterrado com um fio-terra ao terminal terra. Os parafusos de metal que prendem o switch ao bastidor fornecem aterramento ao bastidor.

Avviso! Per i dispositivi WSS installati su un'intelaiatura è necessario un collegamento con messa a terra. Per poter fornire la messa a terra, l'intelaiatura deve essere dotata di una piattina di massa per il collegamento a terra. Le viti metalliche che collegano l'interruttore all'intelaiatura forniscono il collegamento a terra dell'intelaiatura stessa.

Overcurrent warning

Warning! The WSS relies on the building's installation for overcurrent protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 10 A international) is used on the phase conductors.

Avertissement! Ce WSS repose sur les installations de protection contre la surtension du bâtiment. Assurez-vous de ne pas utiliser un fusible ou un disjoncteur de plus de 120 Vca, 15 A U.S. (240 Vca, 10 A internationaux) sur les conducteurs de phase

Warnung! Die Nutzung dieses WSS setzt einen Überstromschutz am Gebäude voraus. Stellen Sie sicher, dass eine Sicherung oder ein Trennschalter mit höchstens 120 V Wechselstrom, 15 A USA (240 V Wechselstrom, 10 A international) bei den Außenleitern verwendet wird.

Advertencia! Este WSS depende de la instalación del edificio en cuanto a la protección de sobrecorriente. Asegúrese de utilizar un fusible o disyuntor no mayor a 120 V AC, 15 A EE.UU. (240 V AC, 10 A internacional) en los conductores de fase.

Aviso! Este WSS depende de o prédio possuir em sua instalação elétrica a proteção contra corrente excessiva. Certifique-se de que sejam usados um fusível ou interruptor que não ultrapassem os 120 V AC, 15 A EUA (240 V AC, 10 A em outros países) nos condutores de fase

Avviso! Questo prodotto fa affidamento sull'installazione all'interno dell'edificio di un sistema di protezione per gli eccessi di corrente. Accertarsi che un fusibile o un interruttore di circuito non superiore a 120 V CA, 15 A U.S.A. (240 V CA, 10 A internazionale) sia utilizzato sui conduttori di fase.

Nortel WLAN - Security Switch 2300 Series Quick Start Guide

Nortel WLAN—Security Switch 2300 Series
Release 6.0

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